APPLICATION # CL1- 0522-1

STAFF ANALYSIS

FEASIBILITY:

Project Scope: The project will renovate existing laboratory space in two buildings to provide expanded hESC capabilities for a shared research laboratory. In one building, an existing generic laboratory will be renovated to provide three primary hESC workstations, and renovate an existing hESC research laboratory with three work stations. In another building, space will be renovated to provide an integrated suite of three rooms for specialized work including biomaterials synthesis and characterization capabilities. The proposal includes a detailed description of work to be undertaken in each room involved in the renovation. A substantial portion of the work to be undertaken is to accommodate new equipment that is proposed to be provided through grant funds. New internal door openings will be installed to provide circulation between rooms in the new suite. A new microscopy room will be constructed in one laboratory. Other work includes providing appropriate secure entry to the laboratory suite and replacement of fixed laboratory benches with movable benches for flexibility. The plans provided in support of the project are early schematic drawings, however, with most equipment placement and circulation issues addressed.

The application indicates that a total of 6,161 gross square feet (gsf) are involved in the renovation that will provide 5,038 assignable area. The difference between gross and assignable would be the thickness of the walls and some circulation space where doors will be added for security and possibly fire protection. A very rough take-off from the drawings confirmed the square footages provided.

Project Management: The proposal identifies construction management processes that are in place at the institution with appropriate institutional management support.

COST:

The budget indicates a lump-sum amount budgeted for each room or suite of rooms involved in the project. There is no breakdown by trade or building system to substantiate the construction amount of $739,000. There is an additional $54,000 budgeted for other institutional-based work for installation of equipment, security hardware and rekeying for a total construction budget of $793,000. In some cases, the budget for work in the individual rooms is very minor. We find that about $30,000 budgeted for work in three rooms that total 1,221 asf or about 25 percent of the indicated project area. We note that for cost comparison purposes, actual renovation work consists of $709,000 involving 3,817 asf. The design fees, administrative costs and project contingency budget of $207,000 represent 26 percent of the construction amount which is slightly over ($9,000) the RFA budget guidelines of 25 percent. However, the amount cited for matching funds is significantly higher than then the minimum required amount.

The overall cost for the 3,817 assignable square feet (asf) actual involving renovation work is $959,000 or $251/asf. To convert this to a comparable figure for gross square feet (gsf) in a typical research-intensive building, one would assume an overall building efficiency of assignable-to-gross area of 60 percent. Thus, the 3,817 asf would equate to 6,361 gsf if one considers the full complement of building space (e.g. the gross building area including circulation and support) constructed to support the area to be renovated. Using this calculated gross area, the cost per gsf would amount to $151/gsf. This provides a more meaningful comparison to new laboratory building construction costs. We conclude that the average cost for new laboratory construction would be about $600/gsf, excluding land and site utilities. This amount would vary widely within California, but is being used here as an indicator of new construction value for comparative purposes. Based on this comparison, we conclude that the renovation work represents about 25 percent of the cost of new laboratory space. Our analysis indicates that costs should not exceed about 65 percent of new construction in order to be considered a reasonably good investment to provide new hESC laboratory space. Therefore, this renovation would be a relatively low-cost improvement in comparison to new space costs.

The applicant indicates that the shared laboratory would be able to accommodate the NIH-free laboratory space needs for 40 Principal Investigators (PIs), accommodating up to 20 PIs in each of the two locations. However, some of these users are PIs that are based at other hESC research institutions in the area that have also applied for a shared research laboratory. If one considers only the institutional-based PIs (e.g., 25) the cost per PI would be $40,000. Based on CIRM funding only (construction and equipment) the cost per institutional-based PI is $80,000.

The applicant indicates that in the event project costs exceed the approved budget, there will be bid alternates included in the project to eliminate selected work, or additional funds will be provided by the institution.

TIMELINE:

The project schedule indicates that preliminary plans and working drawings will be completed in November 2007, about four months after grant award. Subsequent activities include the construction award period and actual construction work which would take an additional six months, with completion in May 2008, indicating a total timeline of 10 months for design and construction.

INSTITUTIONAL COMMITMENT:

The applicant indicates that a total of $833,890 is available for matching funds for the combined renovation and equipment funding request:

- $167,869 in prior expenditures for equipment related to hESC research.
- $56,021 in prior expenses related to hESC research laboratory renovations

- $60,000 committed by the institution for establishment of the second hESC site; however the planned use of these funds is not specified.
- $550,000 committed by the institution for establishment of the second hESC site proposed in this request, with these funds going toward equipment needs.

We note that of this total amount, $116,021 is noted as matching funding for the $1 million request for funding of renovation and $717,869 as matching for the $1 million equipment. The budget match for renovations represents 11.6 percent of the grant amount amount. However, prior expenditures for either renovations or for equipment can be used to provide matching funds as was noted in a clarification issued regarding this RFA. Therefore, considering the equipment and renovations budget in the aggregate, the matching amount of $833,900 for the $2 million requested in grant funds represents 42 percent of the grant, well in excess of the 20 percent match requirement.

HISTORICAL PERFORMANCE:

Project statistics for three projects undertaken between 2004 and 2006 and ranging in cost from $900,000 to $1.4 million were submitted as an indication of historical performance. These projects were all undertaken using a design-bid-build process which is also the process proposed for the shared laboratory renovation. The data indicate that actual project budgets were very close to the original budgets or under budget, and actual scheduled completion dates were two or three months later than the original scheduled completion. The number of change orders noted is reasonable and would indicate successful project management and execution for these prior projects.

The applicant indicates that four laboratory renovation projects (within the cited total project cost range of $1 million to $5 million) with a total value of $7 million have been completed by the applicant in the last two years.

RESPONSIVENESS:

Shared Laboratory: The applicant indicates that there are 25 institutional-based researchers that are either engaged in or planning to undertake hESC research activities. Additional PIs in the area are also cited as being potential users of the facility. Thus, there is likely to be good utilization of the shared laboratory. We would note, however, that some of these potential users may overlap with other shared laboratory applications in this area.

Technique Course: The applicant has not requested funding for a techniques course.

Facilities Work Group Issues

- **Costs—**The amount budgeted for fees and administrative costs exceeds the RFA guideline by $9,000. However, given that the matching funds are in excess of the

minimum required, and therefore, no adjustment is warranted as a result of this over-budgeting.

The grant management office will need to confirm that all conditions of the grant as indicated in the Grants Administration Policy have been met. This would include confirming that all past work is consistent with grant requirements for prevailing wage and other construction-related requirements. This includes confirmation that equipment funds are budgeted pursuant the Grants Administration Policy as adopted December 7, 2006.